

## GENERAL NOTES

**Sexual similarity of Red-headed Woodpeckers and possible explanations based on fall territorial behavior.**—As discussed by Goodwin (Bull. Br. Mus. Zool. 17:1-44, 1968) the sexes are alike or nearly so in only 5 species of woodpeckers. In none of these are the sexes more exactly alike than in Red-headed Woodpeckers (*Melanerpes erythrocephalus*). This presents a challenging problem that has received little attention.

As narrated elsewhere, (Kilham, Wilson Bull. 70:347-358, 1959) 12 Red-headed Woodpeckers settled in one small wood of 1.7 ha in Maryland attracted by pin oak (*Quercus palustris*) acorns. The wood was divided into 12 sharply defined territories, each woodpecker defending its stores, chiefly against interspecific intruders.

In such situations, I suggest that the monomorphism of Red-headed Woodpeckers aids females in establishing and maintaining individual winter territories. If males dominated, the females would be crowded into less favorable habitats. This in turn might mean a poorer winter survival. If, however, as may have happened in their evolutionary past, females were selected to resemble males in plumage and hence have the same display colors, they would have a more equal chance in border contests.

The best parallel that I have been able to find for the sexual similarities in color of *M. erythrocephalus* is that described by Lack (Life of the Robin, H. F. and G. Witherby Ltd., London, 1943) for the British Robin (*Erithacus rubecola*). These birds form small, individual fall territories and the sexes have identical coloration.

One might ask how do juveniles before molting to adult plumage fare in competition with adults? As noted elsewhere (Kilham, op. cit.), among the 12 closely adjacent winter territories observed, the 3 held by juveniles were all peripheral and appeared to be the least desirable. The juveniles, therefore, without red heads, appeared to have fared less well, but lack of experience may also have been a factor.

It would appear from descriptions by Bock (Univ. of Calif. Publ. Zool. 92:1-100, 1970) that the Lewis Woodpecker (*Asyndesmus lewis*) resembles *M. erythrocephalus* in being irregularly migratory in relation to fall storage territories. This may account for the similarity in plumage between the sexes of this species. Acorn Woodpeckers (*M. formicivorus*), which are sexually dichromic, also store mast in the fall. Living in social groups, however, and being to a considerable extent resident on the same territories the year around (MacRoberts, Condor 72:196-204, 1970) they are not exposed to the same selection pressures as are *A. lewis* and *M. erythrocephalus*.

Among sapsuckers, as well presented by Howell (Condor 54:237-282, 1952; Auk 70:118-126, 1953), the eastern Yellow-bellied (*Sphyrapicus v. varius*) is dichromic and highly migratory whereas the western race, *S. v. ruber*, is monochromic and essentially non-migratory. Are there any parallels to the situation encountered in *M. erythrocephalus*? In the absence of information as to whether *S. v. ruber* maintains fall and winter territories, I find it difficult to draw conclusions. It seems likely that monochromatism in birds can arise from more than one kind of selection pressure and that which I have described for an acorn-storing species of woodpecker may not apply, necessarily, to other Picines with other habits.—LAWRENCE KILHAM, Dept. of Microbiology, Dartmouth Medical School, Hanover, NH 03755. Accepted 5 Feb. 1977.

**Notes on the courtship behavior of Brown-capped Rosy Finches.**—Published observations on the life history of the Brown-capped Rosy Finch (*Leucosticte australis*)